

Work Order ID 63636

Friday, November 05, 2010 2:41:40 PM



Page 1

Item ID: D206-667-203TRN

Accept



Setup Start



Revision ID:

Stop



Item Name: Crosstube Turning Detail

Start Date: 11/5/2010 Start Qty: 1.00



Cust Item ID:

Required Date: 11/15/2010 Req'd Qty: 1.00



Customer:

Reference:

Approvals:

Process Plan:

PL

Date:

10-11-05

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
D206-667-243	Rev C								

100

0.00



Mori Seiki

MORI SEIKI CNC LATHE LARGE

Memo

0.00

amk 10/11/10

Mori Seiki CNC Lathe Large

1-Fill tube with sand & install plugs DT8534 on both ends as per Folio
FA089□2-Turn first side as per Folio FA089□3-File down transition lines
smooth.

1 0

110

0.00



QC

QC1- Inspect dimensions to dimension sheet

Memo

0.00

amk 10/11/10

Quality Control

1 0

120

0.00



Mori Seiki

MORI SEIKI CNC LATHE LARGE

Memo

0.00

amk 10/11/10

Mori Seiki CNC Lathe Large

1-Turn second side as per Folio FA089□2-File down transition lines smooth.
□
3-Remove sand and plugs□4-Scrib part# and batch #

1 0

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Page 2

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Customer:

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Date:

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

130

QC1- Inspect dimensions to dimension sheet

0.00



QC

Memo

0.00

Quality Control

aml 10/11/10

1

0

140

QC8- Inspect parts - second check

0.00



QC

Memo

0.00

Quality Control

SAD 10/11/12

0

150

Crosstubes Chemical Conversion

0.00



HandFXtube

Memo

0.00

Hand Finishing Crosstubes

SAD 10-11-12

0

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Page 3

Item ID: D206-667-203TRN

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Revision ID:

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Start Date: 11/5/2010 Start Qty: 1.00

Required Date: 11/15/2010 Req'd Qty: 1.00

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Run Start
Stop

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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160

QC3- Inspect Part Finish

0.00



0.00

QC

Memo

Quality Control

170

Packaging

0.00



0.00

Packaging

Memo

Packaging

Identify and Stock in kanban rack Location: LG 10-11-12

180

QC21- Final Inspection - Work Order Release

0.00



0.00

QC

Memo

Quality Control

10/14/15
10-11-12
✓

W/O:		WORK ORDER CHANGES					
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Picklist Print

Friday, November 05, 2010 2:42:25 PM

Page 1

Work Order ID: 63636



Parent Item: D206-667-203TRN



Parent Item Name: Crosstube Turning Detail

Start Date: 11/5/2010

Required Date: 11/15/2010

Start Qty: 1.00

Required Qty: 1.00

Comments: IPP Rev:A 08-03-06 new issue DD verified by:ec
 IPP Rev B 08.04.02 Removed polish EC verified by: DD
 IPP Rev C 09.01.06 ECN 08-562 EC verified by:DD

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D6004-115 		Manufactured	No			100	Each	50.0000	1	1			

Crosstube Material

Location	Loc Qty	Loc Code
LG	50	
34685	17	
34774	2	
→ 38336	31	

1 *aml 10/17/10*

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DART AEROSPACE LTD	Work Order:	63634
Description: Crosstube Assembly	Part Number:	D206-667-243
Inspection Dwg: D206-667-243 Rev: C		Page 1 of 1

FIRST ARTICLE INSPECTION CHECKLIST

Inspection Sheet	Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
SIDE A	2.490	+0.005/-0.000	2.490	✓		Vern	ML-7
	2.018	+0.005/-0.000	2.018	✓		"	"
	2.079	+0.005/-0.000	2.082	✓		"	"
	2.145	+0.005/-0.000	2.149	✓		"	"
	2.209	+0.005/-0.000	2.214	✓		"	"
	2.287	+0.005/-0.000	2.292	✓		"	"
	2.363	+0.005/-0.000	2.363	✓		"	"
	2.433	+0.005/-0.000	2.437	✓		"	"
	0.200	+/-0.010	.200	✓		"	"
	0.500 x 30°	+/-0.010	.500 x 30°	✓		"	"
	R0.063	+/-0.010	R.063	✓		Rad-gage	REF
	R0.500	+/-0.010	R.500	✓		"	"
	4.438	+/-0.030	4.430	✓		Vern	ML-7
SIDE B	104.91	+/-0.020	104.905	✓		M-tape	ML-2
	2.490	+0.005/-0.000	2.490	✓		Vern	ML-7
	2.018	+0.005/-0.000	2.018	✓		"	"
	2.079	+0.005/-0.000	2.081	✓		"	"
	2.145	+0.005/-0.000	2.149	✓		"	"
	2.209	+0.005/-0.000	2.214	✓		"	"
	2.287	+0.005/-0.000	2.292	✓		"	"
	2.363	+0.005/-0.000	2.366	✓		"	"
	2.433	+0.005/-0.000	2.438	✓		"	"
	0.200	+/-0.010	.200	✓		"	"
	0.500 x 30°	+/-0.010	.500 x 30°	✓		"	"
	R0.063	+/-0.010	R.063	✓		Rad-gage	REF
	R0.500	+/-0.010	R.500	✓		"	"
	4.438	+/-0.030	4.438	✓		Vern	ML-7

Measured by:	anf	Audited by:	8	Preliminary Approval:	N/A
Date:	10/11/10	Date:	10/14/12	Date:	N/A

Rev	Date	Change	Revised by	Approved
A	06.09.01	New Issue (P/O D206-667-203)	KJ/JLM	
B	10.08.25	Dwg Rev updated	KJ	

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Item	Qty -243	Part Number	Description
1	X	D206-667-243	CROSSTUBE ASSEMBLY (206L HIGH AFT)
2	1	D6004-115	CROSSTUBE
3	2	D2873-043	NUT PLATE
4	2	D2873-045	NUT PLATE
5	2	D2892-1	SUPPORT
6	4	D3595-063-450	RUBBER CUSHION
7	4	MS21920-22	CLAMP
8	14	MS20601AD4W10	RIVET (OR NAS9302B-4-10)
9	A/R	MAGNOBOND 6398	ROCKWELL SPECIFICATION RBO-120-023 ADHESIVE (TEXTRON/BELL SPEC. 299- 947-100, TYPE II, CLASS 2 ADHESIVE)

GENERAL NOTES:

- 1) MATERIAL: MANUFACTURED FROM D6004-115
FINISHED LENGTH = 104.91±0.020
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
PRIME INSIDE AND OUTSIDE PER DART QSI 005 4.2
PAINT OUTSIDE PER DART QSI 005 4.2
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED.
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED.
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX.
- 6) IDENTIFICATION: SCRIBE DART PART NUMBER "D206-667-243" AND BATCH NUMBER ON INSIDE OF CUFF USING VIBRATING STYLUS.
- 7) WEIGHT: 21.9 lbs
- 8) PART IS SYMMETRIC ABOUT CENTERLINE.
- 9) RUN CUTTER OFF PART WHERE INDICATED. BLEND OUT EDGE LONGITUDINALLY, TRANSITION SHOULD BE SMOOTH.
- 10) BEND PROGRESSIVELY WITH A MINIMUM OF 8 PASSES. MAXIMUM TUBE FLATTENING DUE TO BENDING IS 6% BASED ON O.D.
- 11) LIQUID PENETRANT INSPECT OUTSIDE SURFACE OF CROSSTUBE PER QSI 038.
- 12) INSTALL D2892-1 SUPPORT USING 0.03" TO 0.06" THICK LAYER OF MAGNOBOND 6398 PER QSI 015. LET CURE FOR 12 HOURS AFTER INSTALLATION AND PRIOR TO PACKAGING.
- 13) INSTALL MS21920-22 CLAMPS WITH D3595-063-450 RUBBER CUSHIONS TO SECURE THE D2892-1 SUPPORT ON TOP SIDE OF THE CROSSTUBE. ENSURE CLAMP MECHANISMS ARE LOCATED ON CROSSTUBE SUPPORTS.
- 14) EXTREME CARE MUST BE TAKEN TO PROTECT THE OUTSIDE SURFACE OF THE TUBE. THE OUTSIDE SURFACE MUST BE SMOOTH AND FREE FROM SURFACE DEFECTS SUCH AS SCRATCHES, NICKS, OR DENTS. DEFECTS UP TO 0.005" MAY BE BLENDED OUT LONGITUDINALLY. CIRCUMFERENTIAL GRIND MARKS ARE UNACCEPTABLE.
- 15) TORQUE CLAMPS 80 TO 100 IN.-LB. ENSURE AT LEAST 1.5 THREADS ARE SHOWING IN SAFETY AND THAT NUT HAS NOT BOTTOMED-OUT AFTER TORQUING.

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 63436
Bf1011-05

RELEASED
8/11/14

C	REVISE GENERAL NOTES/PART LIST (ZN D7-1); REORGANIZED VIEWS AND REFORMATTED DRAWING TO CURRENT STANDARDS. D3595-063-450 WAS D2856-400-773 (ZN D6-2 & A5-2); REMOVED REF. & ADD TOLERANCES (ZN 4-3, C5-3, D3-3); RELOCATED FLAG #6 (ZN A8-3) PER NCR 210; MOVED TURNING DETAIL & UPDATED TOLERANCE TO SHEET 4.	RF	08.11.06
B	ADD HOLES AND NUT PLATES FOR COMPATABILITY WITH BHT/AA SKUDTUBES	PH	05.07.26
A	NEW ISSUE	CP	00.11.17
REV.	DESCRIPTION	BY	DATE
DESIGN	<u>RF</u>	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	<u>RF</u>	DRAWING NO.	REV. C
CHECKED	<u>RF</u>	D206-667-243	SHEET 1 OF 4
MFG. APPR.	<u>RF</u>	TITLE	SCALE
APPROVED	<u>RF</u>	CROSSTUBE ASS'Y (206L HIGH AFT)	NTS
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DATE	08.11.06		

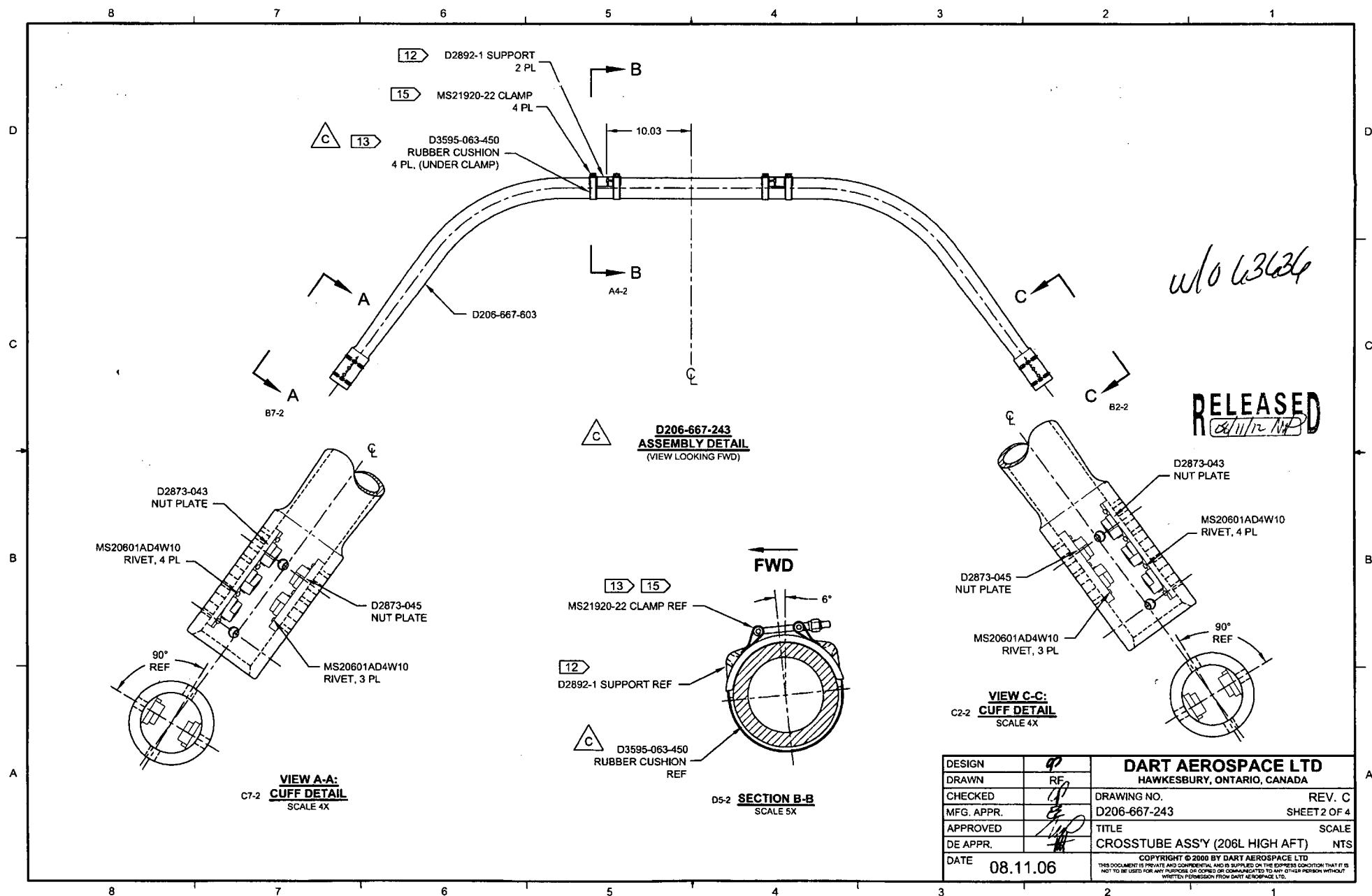
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D206-667-603
BENDING AND DRILLING DETAIL
(VIEW LOOKING FWD)

DETAIL D
SCALE 4X
(VIEW LOOKING FWD)

DETAIL H
SCALE 4X
(VIEW LOOKING FWD)

VIEW F-F
SCALE 5X
(VIEW LOOKING AFT, ROTATED)

VIEW J-J
SCALE 4X
(VIEW LOOKING AFT, ROTATED)

VIEW K-K: CUFF DETAIL
SCALE 4X

SECTION G-G
SCALE 5X

RELEASED

DESIGN	40	DART AEROSPACE LTD	
DRAWN	RF	HAWKESBURY, ONTARIO, CANADA	
CHECKED	40	DRAWING NO.	REV. C
MFG. APPR.	40	D206-667-243	SHEET 3 OF 4
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DE APPR.	40	CROSSTUBE ASS'Y (206L HIGH AFT)	NTS
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06/11/12 M/P

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CHECKED	<i>Q</i>	DRAWING NO.	REV. C
MFG. APPR.	<i>E</i>	D206-667-243	SHEET 3 OF 4
APPROVED	<i>140</i>	TITLE	SCALE
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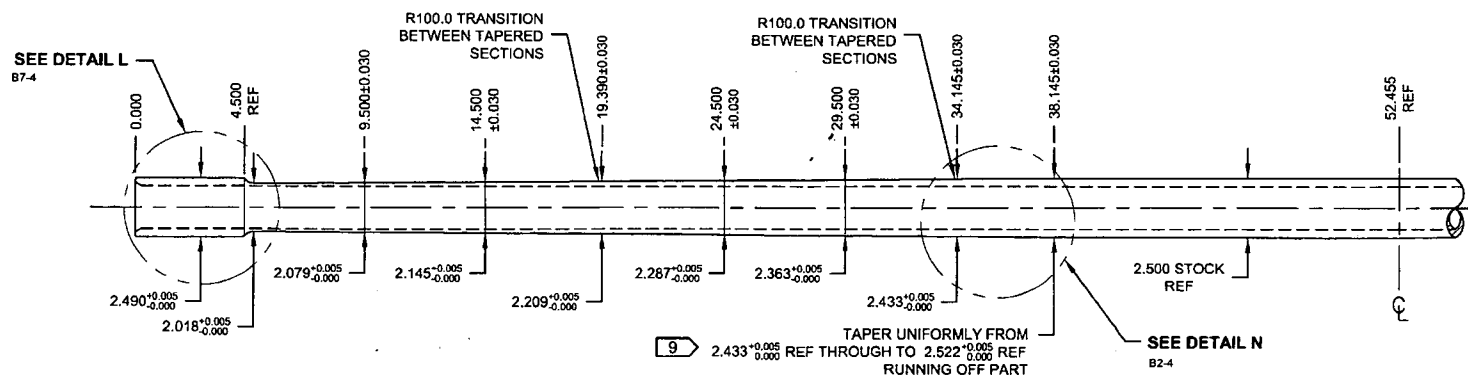
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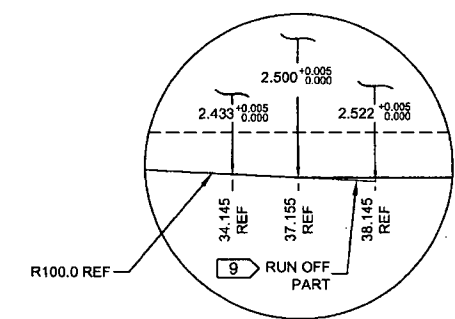
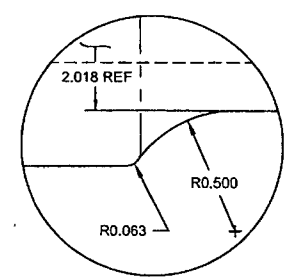
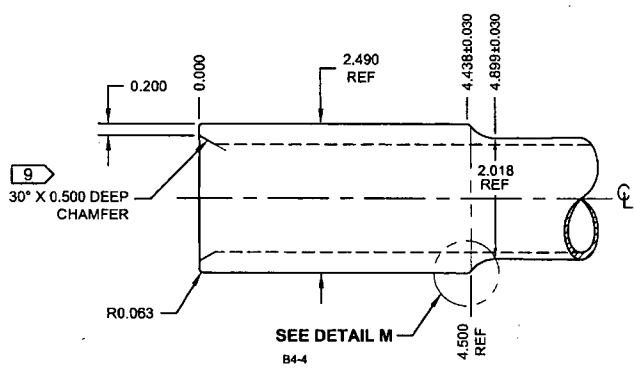
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u/b 43634



TURNING DETAIL



RELEASED
08/11/2006

DESIGN	90	DART AEROSPACE LTD	
DRAWN	RF	HAWKESBURY, ONTARIO, CANADA	
CHECKED	CP	DRAWING NO.	REV. C
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